# **Integrated Natural Resources and Environmental Education**

Integrated Natural Resources and Environmental Education

# V(A). Planned Program (Summary)

# 1. Name of the Planned Program

Integrated Natural Resources and Environmental Education

# V(B). Program Knowledge Area(s)

# 1. Program Knowledge Areas and

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
104	Protect Soil from Harmful Effects of Natural Elements		25%		
112	Watershed Protection and Management		25%		
125	Agroforestry		25%		
131	Alternative Uses of Land		15%		
141	Air Resource Protection and Management		10%		
	Total		100%		

# V(C). Planned Program (Inputs)

# 1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.5	0.0	0.0
Actual	0.0	1.4	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension 212389	Hatch 0	Evans-Allen
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	223861	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	48015	0	0

Report Date 02/27/2009 Page 1 of 6

## V(D). Planned Program (Activity)

## 1. Brief description of the Activity

Several educational activities were conducted for this ETP. The activities were, The Extension Annual Youth Forestry Camp, Kids-N-Creek (3 camps, grades 4-7), Kids Day on the Farm (3 camps, grades K-4), Forestry for Youth (3 camps grades 7-9) the Annual Water Festival for Youth (grades K-6), an Annual Watershed Academy for adults, Home and Farm assessments relative to private well testing/wellhead protection for the 12 Black Belt Counties, timber management, and small acreage water management. PowerPoint presentations and handouts on &ldquoAlabama Natural Resources and Conservation,&rdquo were conducted for elementary and high school students in several counties. Tuskegee Extension agents, in conjunction with ACES, NRCS, and the Forestry Commission, were able to assist hunting and wildlife groups with information relative to improving and enhancing wildlife. Agents conducted one-on-one educational visits with individuals and hunting groups to assist with wildlife management (wildlife food plots). Agents work with area forestry management projects and provided information on reforestation, thinning and prescribed burning. From January through December 2007, Extension specialists, agents, and other state and federal agents worked with a number of youth and youth groups discussing natural resources, water quality, and environmental topics and exploring career choices in the area of natural resources and agriculture.

# 2. Brief description of the target audience

The target audience was mostly limited resource youth and adults in the Alabama Black Belt Region. Social, economic and geographical indicators were similar among all program participants.

# V(E). Planned Program (Outputs)

## 1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

Year	Direct Contacts Adults Target	Indirect Contacts Adults Target	Direct Contacts Youth Target	Indirect Contacts Youth Target
Plan	700	150	850	100
2007	500	300	1100	804

#### 2. Number of Patent Applications Submitted (Standard Research Output)

#### **Patent Applications Submitted**

Year Target Plan: 0
2007: 0

#### **Patents listed**

3. Publications (Standard General Output Measure)

# Number of Peer Reviewed Publications Extension Research

	Extension	Research	Total
Plan			
2007	0	0	0

Report Date 02/27/2009 Page 2 of 6

Integrated Natural Resources and Environmental Education

# V(F). State Defined Outputs

# Output Target Output #1

# **Output Measure**

? Underserved Black Belt area grade school students will be exposed to specific age appropriate educational activities designed to reinforce current classroom instructional curriculums. While targeting the youth, parents, volunteers and community leaders will also be provided necessary instructions in responsible environmental stewardship practices and principles.

Year	Target	Actual
2007	112	125

Report Date 02/27/2009 Page 3 of 6

# $V(\mathbf{G})$ . State Defined Outcomes

01	No.	Outcome Name
	1	Youth participants will acquire knowledge, skills and awareness regarding well head protection, point/non-oint source pollution, environmental stewardship, management of natural resources and water conservation. Adult participants will incorporate skills/knowledge and change behavior related to: pollution prevention, management of water resources, litter disposal and waste management, conservation and recycling of natural resources and safe and effective use of fertilizers and pesticides.

Report Date 02/27/2009 Page 4 of 6

Integrated Natural Resources and Environmental Education

# Outcome #1

#### 1. Outcome

Youth participants will acquire knowledge, skills and awareness regarding well head protection, point/non-oint source pollution, environmental stewardship, management of natural resources and water conservation. Adult participants will incorporate skills/knowledge and change behavior related to: pollution prevention, management of water resources, litter disposal and waste management, conservation and recycling of natural resources and safe and effective use of fertilizers and pesticides.

## 2. Associated Institution Types

•1890 Extension

## 3a. Outcome Type:

Change in Condition Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	177	202

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Data collected via the well head protection sampling program continues to suggest that most instances of onfarm well contamination are the result of situations that can be controlled by a change in management style or cultural practice. Owners of private wells need instruction in well mantainence and well head protection practices.

## What has been done

Areas that presented with contamination concerns were targeted for a resample event. Sites were coded and recorded using GPS systems, current cultural practices were noted, and well head protection plans developed for clients. Clients/well owners were asked to attend two of three workshops on the effective implementation of a well head management plan. Pre-activity evaluations were conducted. Six sites per county were selected, and all samples were replicated in triplicate.

## Results

The samples results were returned with a relatively minute margin of error. A review of the current cultural practices revealed that proper well head manaagement techniques regarding waste management and the appropriate methods for material storage were the greatest threat to water safety. Approximately three months following the implementation of the individual well head protection plans, wells were resampled and results indicate a positive change in water quality. A survey of owner attitude and perceptions indicate a rapid response and adoption of most measures outlined in the management document.

# 4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
104	Protect Soil from Harmful Effects of Natural Elements

## V(H). Planned Program (External Factors)

#### **External factors which affected outcomes**

- ? Natural Disasters (drought, weather extremes, etc.)
- ? Economy
- ? Appropriations changes
- ? Public Policy changes
- ? Government Regulations
- ? Competing Programatic Challenges
- ? Populations changes (immigration,new cultural groupings,etc.)

Report Date 02/27/2009 Page 5 of 6

## **Brief Explanation**

The 2007 calendar year was one of extreme heat and drought. Outdoor instructional activities were tailored to adjust to these conditions. Kids in the Creek activities were altered because several streams had very little or practically no water present during the summer months when these classes would normally occur. The impact of the economy continues to dictate that several young adults that are often available to attend summer camps must or have chosen to find work to supplement the family income.

## V(I). Planned Program (Evaluation Studies and Data Collection)

#### 1. Evaluation Studies Planned

- ? Before-After (before and after program)
- ? During (during program)
- ? Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- ? Comparison between locales where the program operates and sites without program intervention

#### **Evaluation Results**

Significant response differences are experienced between pre and post evaluation participants. Students demonstrate an increase in overall awareness as indicated by test results. Adult participants indicate a marked change in attitude and perception when reviewing post activity evaluation results. Over 70% of adult participants indicate a change in participant behaviour.

## **Key Items of Evaluation**

While many seminars, conferences, and workshops have been conducted, more local workshops, conferences, and seminars are needed to make citizens aware (especially the minority groups) of environmental stewardship, including the quality and status of drinking water.

Report Date 02/27/2009 Page 6 of 6